AMENDMENTS TO THE CLAIMS:

Please replace the claims with the claims provided in the listing below wherein status, amendments, additions and cancellations are indicated.

1-11. (Canceled)

12. (New) A method for grinding a workpiece which is rotationally symmetrical about a workpiece axis and has a longitudinal bore and first and second end sides axially opposing each other, said first end side having a substantially conical surface to be ground which is truncated and has a meridian cross-section having a substantially straight contour along the said substantially conical surface, comprising:

chucking said workpiece at said second end side to place the workpiece into a chucked state without chucking said workpiece at said first end side;

rotating said workpiece in said chucked state about a workpiece;

providing a first grinding wheel on a pivoting grinding headstock , said first grinding wheel having first and second annular side surfaces, and an outer grinding wheel surface between said first and second annular side surfaces;

said outer grinding wheel surface being defined by a substantially straight line contour extending in an axial direction and parallel to an axis of said first grinding

wheel, an axial length of said outer grinding wheel surface of said first grinding wheel extending over an entirety of said substantially conical surface;

providing a second grinding wheel on said pivoting grinding headstock, said second grinding wheel having a smaller diameter than a diameter of said first grinding wheel;

positioning said first grinding wheel with said axis of said first grinding wheel aligned parallel to said substantially conical surface and said outer grinding wheel surface aligned along a direction of said workpiece axis with said substantially conical surface of said workpiece in said chucked state such that a projection of said outer grinding wheel surface in a direction of said workpiece axis completely covers said substantially conical surface;

grinding said substantially conical surface with said outer grinding wheel surface such that said grinding is done with said workpiece in said chucked state by relatively displacing said workpiece and said first grinding wheel along said direction of said workpiece;

positioning said second grinding wheel into said longitudinal bore of said workpiece by pivoting on said pivoting grinding headstock; and

grinding said interior wall with said workpiece in said chucked state by displacing said second grinding wheel and an interior wall of said longitudinal bore relative to one another;

wherein said workpiece remains in said chucked state from a time prior to said grinding of said interior wall and said substantially conical surfaces until said grinding of said interior wall and said substantially conical surface is completed.

13. (New) The method of claim 12, wherein:

said positioning of said first grinding wheel is effected by pivoting said headstock, and moving said headstock in a direction perpendicular to said workpiece axis;

said grinding of said substantially conical surface is effected by moving said workpiece in said chucked state in a direction of said workpiece axis into said first grinding wheel; and

said positioning of said second grinding wheel is effected by pivoting said headstock, and moving said headstock in a direction perpendicular to said workpiece axis.

14. (New) The method of claim 13, wherein said first and second grinding wheels are respectively mounted on first and second spindles on said pivoting headstock which are spaced apart from one another and disposed on opposing sides of a pivot axis of said pivoting headstock.

15. (New) The method of claim 13, wherein said interior wall of said

longitudinal bore is ground using longitudinal grinding.

16. (New) The method of claim 13, wherein said interior wall of said longitudinal bore is ground using peel grinding.

17. (New) The method of claim 13, wherein said interior wall of said longitudinal bore is ground using infeed grinding.

18. (New) The method of claim 12, wherein said substantially straight contour of said meridian cross-section is a straight contour, said substantially conical surface is a truncated cone surface, and said substantially straight line contour of said first grinding wheel is a straight line.

19. (New) An apparatus for grinding a rotationally symmetrical workpiece having a first end side to be ground and an axially opposing second end side, and a central bore extending inward from said first side and coaxial with said workpiece axis, said apparatus comprising:

a chucking device for clamping of said workpiece at an exterior circumference of said second end side without chucking said workpiece at said first end side and rotating said workpiece about a workpiece axis;

a grinding spindle slide movable in spindle slide direction running transverse

to the workpiece axis;

a device for longitudinal displacement of said workpiece in a direction of said workpiece axis;

a grinding headstock that is attached to said grinding spindle slide via a pivot having a pivot axis oriented orthogonal to said workpiece axis and said spindle slide direction;

first and second grinding spindles mounted on said grinding headstock and having axes orthogonal to said pivot axis;

a first grinding wheel mounted to said first grinding spindle, said first grinding wheel having first and second annular side surfaces, and an outer grinding wheel surface between said first and second annular side surfaces;

said outer grinding wheel surface being defined by a substantially straight line contour extending in an axial direction and parallel to an axis of said first grinding wheel and having a width in said axial direction of said first grinding wheel that is larger than a surface width of a substantially conical surface of said first side surface to be ground; and

a second grinding wheel mounted on said second grinding spindle and having a smaller diameter than a diameter of said first grinding wheel;

said grinding headstock being pivotable on said pivot so as to:

position said first grinding wheel axis parallel to said substantially conical surface of said first side surface to be ground;

position said outer grinding wheel surface aligned along a direction of said workpiece axis with said substantially conical surface of said workpiece in said chucked state such that a projection of said outer grinding wheel surface in a direction of said workpiece axis completely covers said substantially conical surface; and

position said second grinding wheel in said central bore with an axis of said second grinding wheel spaced from and parallel to said workpiece axis.

20. (New) The apparatus of claim 19, wherein said first and second spindles are mounted on said pivoting headstock are spaced apart from one another and disposed on opposing sides of said pivot axis of said pivoting headstock.

21. (New) The apparatus in accordance with claim 20, wherein in said first and second spindles run parallel to one another and said first and second grinding wheels are disposed on a common side of said pivoting headstock.

22. (New) The apparatus of claim 21, wherein said chucking device is slidably mounted to slide in a direction of said workpiece axis.

23. (New) The apparatus of claim 22, wherein said substantially straight line contour of said first grinding wheel is a straight line.

24. (New) The apparatus of claim 19, further comprising a third grinding wheel mounted on a third spindle supported by said pivoting headstock, and said first, second and third spindles are mounted on said pivoting headstock at angle intervals of 120 degrees each.

25. (New) The apparatus of claim 19, wherein said chucking device is slidably mounted to slide in a direction of said workpiece axis.

26. (New) The apparatus of claim 25, wherein said substantially straight line contour of said first grinding wheel is a straight line.

27. (New) The apparatus of claim 19, wherein said substantially straight line contour of said first grinding wheel is a straight line.